
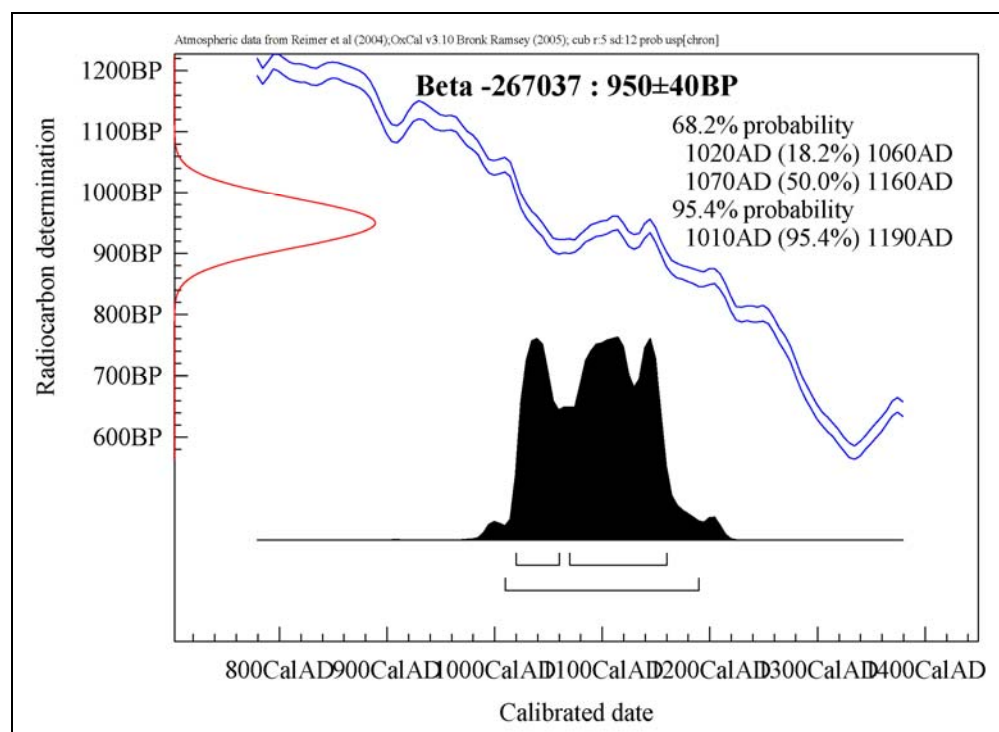
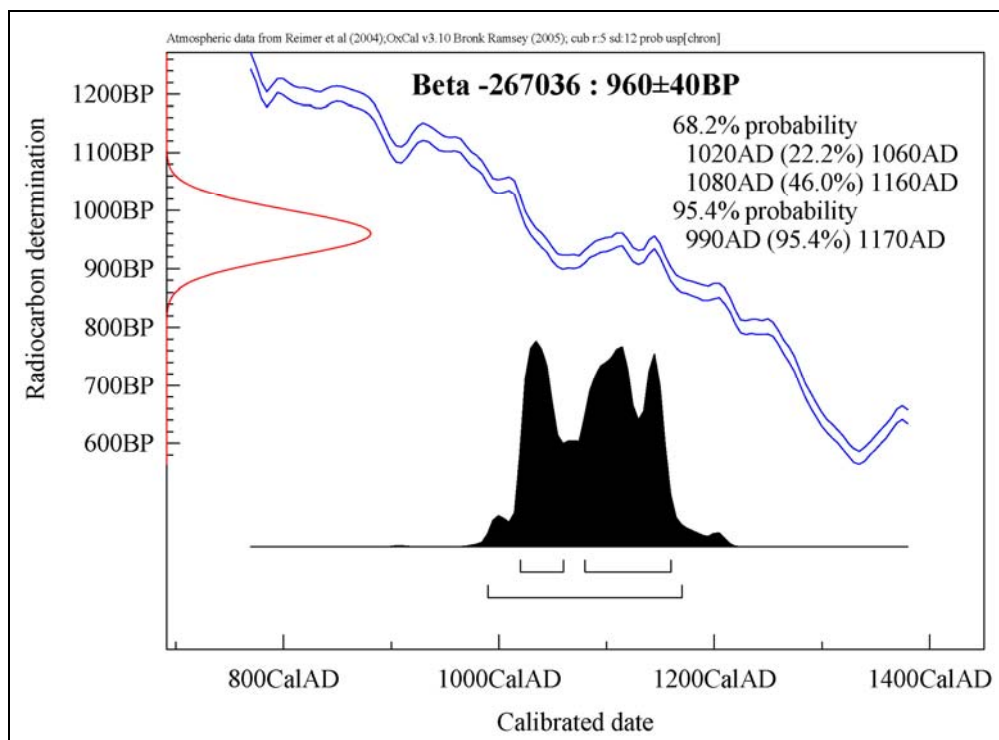


## Appendix C Radiocarbon Dating Analysis

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<b>REPORT OF RADIOCARBON DATING ANALYSES</b>			
Dr. Hallett H. Hammatt/Jon Tulchin		Report Date: 11/16/2009	
Cultural Surveys Hawaii		Material Received: 10/23/2009	
Sample Data	Measured Radiocarbon Age	13C/12C Ratio	Conventional Radiocarbon Age(*)
Beta - 267036 SAMPLE : WAIPAHUKAI01 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (organic sediment): acid washes 2 SIGMA CALIBRATION : Cal AD 1010 to 1170 (Cal BP 940 to 780)	930 +/- 40 BP	-22.9 o/oo	960 +/- 40 BP
Beta - 267037 SAMPLE : WAIPAHUKAI02 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (organic sediment): acid washes 2 SIGMA CALIBRATION : Cal AD 1010 to 1170 (Cal BP 940 to 780)	930 +/- 40 BP	-23.6 o/oo	950 +/- 40 BP

Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 95% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1 relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured 13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by "\*\*". The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.



### **OxCal Calibration Results**